Department of Energy
Carlsbad Field Office
P. O. Box 3090
Carlsbad, New Mexico 88221

MAY 21 2004

Mr. Steve Zappe, WIPP Project Leader
Hazardous Waste Permits Program
Hazardous and Radioactive Materials Bureau
New Mexico Environment Department
2905 E. Rodeo Park Drive, Bldg. 1
Santa Fe, NM 87505

Subject: Transmittal of Approved Savannah River Site (SRS) Waste Stream Profile Form SR-W027-235F-HET, TRU Mixed Heterogeneous Debris

Dear Mr. Zappe:

The Department of Energy, Carlsbad Field Office (CBFO) has approved the Savannah River Site Waste Stream Profile Form SR-W027-235F-HET. Enclosed is a copy of the approved form as required by Section B-4(b)(1) of the WIPP Hazardous Waste Facility Permit No. NM4890139088-TSDF.

If you have any questions on this matter, please contact me at (505) 234-7357 or (505) 706-0066.

Sincerely,

Kerry W. Watson
CBFO Assistant Manager
Office of National TRU Program

Enclosure

cc: w/o enclosure
J. Kieling, NMED
C. Walker, TechLaw
M. Strum, WTS
K. Dunbar, WRES
L. Greene, WRES
CBFO M&RC

040523

CBFO:NTP:KWW:JGW:04-1442:UFC:5822

CCP Waste Stream Profile Form

(1) Waste Stream Profile Number: SR-W027-235F-HET		
(2) Generator site name: SRS	(3)Technical contact: Steven Rose	
(3) Generator site EPA ID: SC 1890008989	(3) Technical contact phone number: 505-234-7591	
(4) Date of audit report approval by NMED: April 9, 2003		
(4) Title, version number, and date of documents used for WAP Certification: CCP-PO-001, rev. 8, CCP Transuranic Waste Characterization Quality Assurance Project Plan, March 15, 2004 CCP-PO-002, rev. 9, CCP Transuranic Waste Certification Plan, March 15, 2004 CCP-PO-004, rev. 14, CCP/SRS Interface Document, October 9, 2003		
Did your facility generate this waste? Yes ☒ No ☐	(5) If no, provide the name and EPA ID of the original generator: N/A	
Waste Stream Information[1]		
(6) WIPP ID: W027-235F-HET	(7) Summary Category Group: S5000	
(8) Waste Matrix Code Group: Heterogeneous Debris	(9) Waste Stream Name: Heterogeneous Debris from Building 235F	
(10) Description from the TWBIR: W027-235F-HET: This waste is primarily solids consisting of mainly booties, lab coats, floor sweepings, labware, rags, and other job control wastes.		
(11) Defense TRU Waste: Yes ☒ No ☐	(11) Check One: CH ☒ RH ☐	
(11) Number of SWBs N/A	(11) Number of Drums 1,600 (55-gallon) current total 57 (55-gallon) additional projected	(11) Number of Canisters N/A
(12) Batch Data report numbers supporting this waste stream characterization: See CIS form CCP-TP-002-A4 (page 20 of 27)		
(13) List applicable EPA Hazardous Waste Codes:[2] D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D035, F002, F003		
(14) Applicable TRUCON Content Codes: SR 225A, SR 225B, SR 225C, SR 225D, SR 225E, SR 225F, SR 225G		
Acceptable Knowledge Information[1]		
[For the following, enter supporting the documentation used (i.e., references and dates)]		
Required Program Information		
(15) Map of site: CCP-AK-SRS-6, Rev. 0, February 9, 2004, Attachment 2		
(15) Facility mission description: CCP-AK-SRS-6, Rev. 0, February 9, 2004, Sections 2.0 and 4.2		
(15) Description of operations that generate waste: CCP-AK-SRS-6, Rev. 0, February 9, 2004, Section 4.3		
(15) Waste identification/categorization schemes: CCP-AK-SRS-6, Rev. 0, February 9, 2004, Section 4.5		
(15) Types and quantities of waste generated: CCP-AK-SRS-6, Rev. 0, February 9, 2004, Section 4.4.1		
(15) Correlation of waste streams generated from the same building and process, as appropriate: CCP-AK-SRS-6, Rev. 0, February 9, 2004, Section 4.4.2		
(15) Waste certification procedures: See CIS form CCP-TP-002-A3 (pages 17-19 of 27)		
Required Waste Stream Information		
(16) Area(s) and building(s) from which the waste stream was generated: CCP-AK-SRS-6, Rev. 0, February 9, 2004, Section 5.1		
(16) Waste stream volume and time period of generation: CCP-AK-SRS-6, Rev. 0, February 9, 2004, Section 5.2		
(16) Waste generating process description for each building: CCP-AK-SRS-6, Rev. 0, February 9, 2004, Section 4.3 and 5.3		
(16) Process flow diagrams: CCP-AK-SRS-6, Rev. 0, February 9, 2004, Attachment 2, Figures 5 through 8		

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(16) Material inputs or other information identifying chemical/radionuclide content and physical waste form: CCP-AK-SRS-6, Rev. 0, February 9, 2004, Section 5.4		
(16) Which Defense Activity generated the waste: (check one)		
☐ Weapons activities including defense inertial confinement fusion	☐ Naval Rectors development	
☐ Verification and control technology	☒ Defense research and development	
☐ Defense nuclear waste and material by products management	☒ Defense nuclear material production	
☐ Defense nuclear waste and materials security and safeguards and security investigations		
Supplemental Documentation		
(17) Process design documents: None Compiled		
(17) Standard operating procedures: P001-P139, D010, D017		
(17) Safety Analysis Reports: D002, D005, D006, D007, D011		
(17) Waste packaging logs: M019, M020, M023, P039		
(17) Test plans/research project reports: D010, D034, D036-D054, D057		
(17) Site databases: D019, M016, M021, M022		
(17) Information from site personnel: C004, C008, C013, C014		
(17) Standard industry documents: None Compiled		
(17) Previous analytical data: C025, C075-C077, M025		
(17) Material safety data sheets: M008		
(17) Sampling and analysis data from comparable/surrogate Waste: C025, M025		
(17) Laboratory notebooks: None Compiled		
Sampling and Analysis Information[2]		
For the following, when applicable, enter procedure title(s), number(s) and date(s)		
	(18) Radiography: See CIS form CCP-TP-002-A3 (page 17 of 27)	
	(18) Visual Examination: See CIS form CCP-TP-002-A3 (page 17 of 27)	
	Headspace Gas Analysis	
	(19) VOCs: See CIS form CCP-TP-002-A3 (page 17-18 of 27)	
	(19) Flammable: See CIS form CCP-TP-002-A3 (page 17-18 of 27)	
	(19) Other gases (specify): N/A	
	Homogeneous Solids/Soils/Gravel Sample Analysis	
	(20) Total metals: N/A	
	(20) PCBs: N/A	
	(20) VOCs: N/A	
	(20) Nonhalogenated VOCs: N/A	
	(20) Semi-VOCs: N/A	
	(20) Other (specify): N/A	
Comments: N/A		

CCP Waste Stream Profile Form

Waste Stream Profile Form Certification:

I hereby certify that I have reviewed the information in this Waste Stream Profile Form, and it is complete and accurate to the best of my knowledge. I understand that this information will be made available to regulatory agencies and that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

(21)	S. B. Rose	5-6-04
Signature of Site Project Manager	Printed Name	Date

NOTE: (1) Use back of sheet or continuation sheets, if required.
(2) If radiography, visual examination, headspace gas analysis, and/or homogeneous solids/soils/gravel sample analysis were used to determine EPA Hazardous Waste Codes, attach signed Characterization Information Summary documenting this determination.

SUMMATION OF ASPECTS OF AK SUMMARY REPORT: SR-W027-235F-HET

Overview:

Beginning operations in 1960, the Savannah River Site (SRS) Building 235-F converted Np-237 oxide into billets for extrusion into reactor targets that were subsequently irradiated and processed to recover Pu-238 and then converted to an oxide. The Pu-238 was ultimately fabricated into various types of fuel forms in the Plutonium Fuel Form Facility (PuFF) within Building 235-F. The Metallography Laboratory (Met Lab) and the Plutonium Experimental Facility (PEF) were also located in Building 235-F. The Met Lab supported the PuFF operation by preparing and examining the product. The PEF developed and demonstrated processes for the production of fuel forms. The fuel forms were used for defense and non-defense programs. The wastes generated from these processes were not segregated based on defense vs. non-defense use of the final products.

As a result of various activities conducted in support of the mission (e.g., operation, maintenance, construction, repair, cleaning, facility modifications, and decommissioning), the facility generated TRU waste. Waste contaminated primarily with defense-related Pu-238 and Np-237 material was generated by these activities at SRS.

This summation of the AK Summary Report includes information to support Waste Stream Profile Form (WSPF) Number SR-W027-235F-HET for Heterogeneous Debris Waste relating to the facility's history, configuration, equipment, process operations, and waste management practices. Information contained in this summary was obtained from numerous sources, including facility safety basis documentation, historical document archives, generator and storage facility waste records and documents including SRS Burial Ground Records and databases, and interviews with operational and waste management personnel. Additional details are discussed in CCP-AK-SRS-6, *Central Characterization Project Acceptable Knowledge Summary Report for Savannah River Site Waste Stream: SR-W027-235F-HET,* Revision 0, dated February 9, 2004.

Waste Stream Identification Summary:

Site Where TRU Waste Was Generated:	Savannah River Site
Waste Stream Name:	Heterogeneous Debris from Building 235-F
Waste Stream Number:	SR-W027-235F-HET
Dates of Waste Generation:	December 1972 to present
Facility Where TRU Waste Was Generated:	Building 235-F
Summary Category Group:	S5000 – Debris Waste
Waste Matrix Code Group:	Heterogeneous Debris
Waste Matrix Code:	S5400
Waste Stream TWBIR Identification:	W027-235F-HET (and wastes re-assigned from T001-235F-HET[1] and W026-235F-HET[1])

[1] In the TWBIR, the waste stream T001-235F-HET was initially assigned as a non-hazardous waste stream. Waste steam W026-235F-HET was initially assigned to hazardous job control waste that was generated after January 25, 1990. However, based on the Acceptable Knowledge evaluation, waste streams T001-235F-HET and W026-235F-HET have been combined into the W027-235F-HET waste stream because the waste was generated from similar activities, and is similar in material, physical form, and hazardous constituents.

Waste Stream Volume:	1,600 drums (55-gallon) current total 57 drums (55-gallon) additional projected
RCRA Hazardous Waste Codes:	D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D035, F002, F003
TRUPACT-II Content Code (TRUCON):	SR 225A, SR 225B, SR 225C, SR 225D, SR 225E, SR 225F, SR 225G

Waste Stream Description and Physical Form:

The activity that generated waste from Building 235-F is production of nuclear materials and related support activities (i.e., research and development operations in the PEF; metallography laboratory operations; and routine maintenance, waste repackaging, and post-production cleanup of these facilities).

The waste is similar in material and physical form in that the drums contain a variety of organic and inorganic debris waste items (e.g., plastic sheeting, paper wipes, metal hardware, filters, rags, motors, hand tools, cardboard, rope, brushes, leaded gloves, glassware, etc.). There may be drums that contain a mixture of debris and a small amount of sludge from the sludge removal activities. Any drums identified by radiography with predominantly sludge will be removed from this debris waste stream.

Based on the AK evaluation, Waste Matrix Code S5400, Heterogeneous Debris, is applied to this waste stream. The definition of this Waste Matrix Code is provided in the DOE Waste Treatability Group Guidance. This category includes waste that is at least 50% by volume debris materials that do not meet the criteria for assignment as either an Inorganic Debris (S5100) or Organic Debris (S5300).

Point of Generation - Area and Building of Generation

This waste stream was generated within Building 235-F and includes the wastes generated from the Actinide Billet Line, Plutonium Fuel Form, Plutonium Examination Facility, and Metallography Laboratory processes. Wastes were also generated as a result of maintenance, renovation, and decommissioning activities within the building.

Description of Waste Generating Process

The waste was generated in Building 235-F during the production of nuclear materials in the Actinide Billet Line (ABL) and Plutonium Fuel Form (PuFF) facilities and related support activities (i.e., research and development operations in the Plutonium Examination Facility (PEF); Metallography Laboratory operations; and routine maintenance, waste repackaging, and post-production cleanup of these facilities). These facilities are no longer in operation. Future TRU waste may be generated from surveillance and maintenance activities.

The primary operation of the ABL was to manufacture neptunium oxide and aluminum powder billet assemblies. The principal operations involved in billet assembly production are blending of Np-237 oxide and aluminum powder, die preparation, cold pressing, loading compacts in an aluminum billet, welding, and leak testing.

The primary function for the PuFF facility was to produce encapsulated Pu-238 oxide fuel forms. The fuel form was made by hot pressing a blended Pu-238 oxide shard mixture prepared from calcined plutonium oxalate powder. After final heat treatment, the fuel pellet was encapsulated in iridium-clad vent sets by tungsten inert gas welding.

The Metallography Laboratory (Met Lab) prepared and examined samples of Pu-238 oxide fuel pellets, shard intermediates, and welded iridium.

The PEF provided capability for developing and demonstrating processes for the production of fuel forms. The PEF was primarily intended for technical support for the operations of the PuFF facility and to provide development of improved processes and fuel forms. Processing involved converting oxide powder into fuel forms for heat sources by powder ceramic and metallurgical processes.

During the years in which Building 235-F was in production, numerous preventive and periodic maintenance activities resulted in waste generation. Typical activities included filter replacement, cleaning, equipment repairs and replacement, maintenance, and decontamination. Waste has also been generated from various renovation and decommissioning activities.

RCRA Determinations

Hazardous Waste Determinations

Waste generated in this facility does not qualify for any of the exclusions outlined in 40 CFR 260 or 261. Radiography or visual examination confirms the absence of liquids and containerized gases, therefore the waste are not ignitable, corrosive, or reactive.

Following is a table of hazardous chemicals and metals identified as applicable to this waste stream:

arsenic	Methylene chloride
barium	Trichlorofluoromethane (Freon 11)
cadmium	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon 113)
chromium	1,1,1-Trichloroethane
lead	acetone
mercury	xylene
selenium	
silver	
benzene	
Carbon tetrachloride	
Methyl ethyl ketone	

Ignitability

Ignitable materials are not present in Building 235-F TRU waste stream. The waste does not exhibit the characteristic of ignitability as identified in 40 CFR 261.21. Liquids with flashpoints <140°F were used. However, radiography or visual examination of the waste during the Central Characterization Project confirmation activities ensures the absence of liquids in the waste stream. Ignitable compressed gases (e.g. aerosol cans) were used in the building, but radiography or visual examination ensures the absence of non-punctured aerosol cans. The F003 hazardous waste code is conservatively applied to the waste stream because solvents were used even though the waste is not ignitable. The hazardous waste code for ignitability (D001) does not apply to this waste stream.

Corrosivity

Corrosive materials are not present in this waste stream. The waste does not exhibit the characteristic of corrosivity as identified in 40 CFR 261.22. This waste is not liquid. The corrosivity characteristic (D002) does not apply to this waste stream.

Reactivity

Aluminum powder was used in the manufacturing of actinide billets, but the aluminum powder would have been present only in minute quantities from wiped surfaces and would have oxidized once it was removed from the glove bag and during subsequent storage. The waste stream does not exhibit the characteristic of reactivity as identified in 40 CFR 261.23. Therefore, the waste code for reactivity (D003) is not assigned to this waste stream.

Toxicity Characteristic

The wastes in this waste stream exhibit the characteristic of toxicity per 40 CFR 261.24 for the following metal and organic contaminants:

Arsenic (D004)
Arensic was detected in samples of tank sludge and therefore is an indication that arsenic was used in the building and may be present in this debris waste stream. Small amounts of sludge may be present in this debris waste stream. Based on this information, the D004 hazardous waste code has been conservatively applied to this waste stream.

Barium (D005)
Barium was an ingredient in some paints used in the building. Based on this information, the D005 hazardous waste code has been conservatively applied to this waste stream.

Cadmium (D006)
Cadmium was detected in samples of tank sludge and therefore is an indication that cadmium was used in the building and may be present in this debris waste stream. Small amounts of sludge may be present in this debris waste stream. Cadmium and cadmium nitrate were used in the Plutonium Examination Facility. Based on this information, the D006 hazardous waste code was conservatively assigned to this waste stream.

Chromium (D007)
Chromium was an ingredient in commercial products (e.g. paints) used in the building. Chromium and chromium nitrate were used in the Plutonium Examination Facility. Chromium was also detected in samples of tank sludge and therefore is another indicator that it was used in the building and may be present in this debris waste stream. Small amounts of sludge may be present in this debris waste stream. Based on this information, the D007 hazardous waste code was conservatively assigned to this waste stream.

Lead (D008)
Sources of lead include various forms of shielding such as leaded rubber gloves, shielding plates, lead shot, spacers, and glass windows. Lead was also present in the paint used in the area. Lead was also detected in samples of tank sludge and therefore is another indicator that it was used in the building and may be present in this debris waste stream. Small amounts of sludge may be present in this debris waste stream. Based on this information, the D008 hazardous waste code was conservatively assigned to the waste stream.

Mercury (D009)
Sources of mercury in the waste include mercury vapor bulbs in the Plutonium Fuel Form facility cells, batteries, and thermometers. Mercuric nitrate was used in the Plutonium Examination Facility. Mercury was also detected in samples of tank sludge and therefore is another indicator

that it was used in the building and may be present in this debris waste stream. Small amounts of sludge may be present in this debris waste stream. Based on this information, the D009 hazardous waste code has been conservatively assigned to this waste stream.

Selenium (D010)
Selenium was detected in samples of tank sludge and therefore is an indication that selenium was used in the building and may be present in this debris waste stream. Small amounts of sludge may be present in this debris waste stream. Based on this information, the D010 hazardous waste code has been conservatively applied to this waste stream.

Silver (D011)
Silver chloride and silver nitrate were used in the Plutonium Examination Facility. Silver was detected in samples of tank sludge and therefore is another indicator that silver was used in the building and may be present in this debris waste stream. Small amounts of sludge may be present in this debris waste stream. Based on this information, the D011 hazardous waste code has been conservatively applied to this waste stream.

Benzene (D018)
Benzene was a candidate seal pot fluid and an ingredient in paints used in the building. Based on this information, the D018 hazardous waste code has been conservatively applied to this waste stream.

Carbon Tetrachloride (D019)
Carbon tetrachloride was used in the Plutonium Examination Facility. Based on this information, the D019 hazardous waste code has been conservatively applied to this waste stream.

Methyl ethyl ketone (D035)
Methyl ethyl ketone was an ingredient in paints and adhesives used in the building. Based on this information, the D035 hazardous waste code has been conservatively applied to this waste stream.

Listed Waste

The material in this waste stream was mixed with or derived from waste listed in 40 CFR 261, Subpart D as a hazardous waste from non-specific sources. Methylene chloride, 1,1,1-trichloroethane, trichlorofluoromethane, 1,1,2-trichloro-1,2,2-trifluoroethane, xylene, and acetone were used for their solvent properties. Example solvent uses include routine housekeeping, laboratory equipment cleaning, cleaning to facilitate equipment repair, various mechanical repairs, and associated maintenance. Based on this information, this waste stream has been conservatively assigned the F002, and F003 hazardous waste codes.

K, P, or U Listed Waste
The material in this waste stream is not hazardous from specific sources since it was not generated from any of the processes listed in 40 CFR 261.32; nor does it consist of discarded chemical products, off-specification compounds, container residues or spill residue listed in 40 CFR 261.33. Therefore, the material in this waste stream is not K-listed or U- or P-listed.

Beryllium
Beryllium may be present in the waste stream but does not meet the definition of a P015-listed waste. Building 235-F did not process beryllium materials. Beryllium exists only as a contaminant in the plutonium fuel forms and billets fabricated in Building 235-F. Individual drums will contain less than one weight percent beryllium.

Conclusion

The following EPA hazardous waste codes are assigned to waste stream SR-W027-235F-HET: D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D035, F002, and F003.

Polychlorinated Biphenyls

No PCB containing components are identified in this waste stream. To ensure the waste does not contain PCBs, items such as transformers, capacitors, and lamp ballasts are managed as prohibited items when identified by radiography or visual examination.

Prohibited Items

The absence of prohibited items is determined and documented through acceptable knowledge and confirmation activities. Radiography or visual examination is performed on each container in this waste stream as a confirmation activity. The following items have been determined as not present in the waste:

- Liquids
- Non-radioactive pyrophoric materials
- Waste incompatible with backfill, seal and panel closure materials, container and packaging materials, or other wastes
- Explosives or compressed gases
- PCBs in concentration greater than or equal to 50 ppm
- Waste exhibiting the characteristics of ignitability, corrosivity, or reactivity
- Non-mixed hazardous wastes

Headspace Gas/Volatile Organic Compound Information

Lot #1 of waste stream SR-W027-235F-HET consists of a total of 31 drums. No target analytes were detected above PRQL. 1,1,1-Trichloroethane was detected in 13 drums and was the most commonly detected target analyte in Lot #1. Butanol was the next most commonly detected target analyte (three drums). Other target analytes including 1,1-dichloroethane, methylene chloride, toluene, trichloroethylene, acetone, methanol, and methyl ethyl ketone were detected once or twice in Lot #1. Four TICs were identified in <25% of the drums sampled and were identified as 2-Methyl, 2-Propanol, Isopropyl alcohol, (S)-2Hydroxypropanoic acid, and Tetrahydro-3-Furanol. No additional hazardous waste codes were added to the waste stream based on headspace gas sampling (HSGS). HSGS analysis confirms the acceptable knowledge for this waste stream. The specifics of this information are included in the attached Characterization Information Summary report.

Radionuclide Information

Radiological Characterization

This waste stream is contaminated primarily with Pu-238 and Np-237. An unknown portion of the hazardous waste from Building 235-F may contain <100 nCi/g TRU alpha contamination, but is managed by the site as TRU mixed waste. Each payload container shipped to WIPP will be certified in accordance with procedure CCP-PO-002, CCP Transuranic Waste Certification Plan, as containing >100 nCi/g of alpha emitting isotopes with half-lives greater than 20 years. This waste stream contains the following radioisotopes:

WIPP Tracked Radionuclides	Other Radionuclides
Sr-90	C-14
Cs-137	C-60

U-233	H-3
U-234	I-129
U-238	Ni-59
Pu-238	Np-237
Pu-239	Pu-241
Pu-240	Se-79
Pu-242	Sn-126
Am-241	Tc-99
	Th-232[1]
	U-235
	U-236

[1] Th-232 was used as a surrogate during facility startup; therefore, there is the potential that some drums may contain significant amounts of thorium. Additionally, thorium is listed as an impurity in the Pu used in PuFF.

AK Source Documents

Source Document Number	Title, Number, Revision	Date
C004	Record of Communication – Interview with Dennis McCaskill and Dave Koester	090/8/03
C008	Record of Communication, Interview with Sally Thomas	09/25/03
C013	Record of Communication, Interview with Penny Spitzer, Brenda Legons, Frances Corley	09/25/03
C014	Record of Communication, Interview with Randy Yourchak, Jeff Schaade, Johnette George	09/25/03
C025	235-F Condensate Tank Resolution, NMP-SPF-91-121	03/12/91
C075	235-F Drums Inspection, AID-CMA-99-110	11/02/99
C076	Inspection Report For Lead Paint From Conduit In Room #1003 at 235-F, AID-CMA-2001-00110	10/29/01
C077	Lead Inspection of the 235-F Airlock #153, AID-CMA-98-0148	09/14/98
D002	Safety Analysis of the 238PuO2 Experimental Facility, DPSTSA-700-30	02/78
D005	Safety Analysis - 200 Area, Savannah River Plant - Separations Area Operations, Building 235-F, Actinide Billet Fabrication Facility, DPSTSA - 200-10-SUP17	Undated
D006	Safety Analysis 200F- Area, Savannah River Site - Building 235-F, Final Safety Analysis Report (U), Volume 6 (Chapters 6 through 8), WSRC-RP-89-575, Volume 6, Revision 0	11/92
D007	Safety Analysis - 200 Area, Savannah River Plant - Separations Area Operations, 238Pu O2 Fuel Form Facility (Sup1), DPSTSA-200-10-1, Copy 18	June 1983 (10/82 available)
D010	Plutonium Fuel Form Facility, Process and Equipment Description and Process Directions, DPSOLs 235-F –PuFF-1800-thru -3199 (U), DPSOP 268, Revision 21	07/82
D011	Safety Analysis- 200 Area, Savannah River Plant, Building 235-F Vaults, DPSTSA-200-10-SUP-15	08/86
D017	Building 235-F History, D&D, Missions (Transition Cover Letter)	02/01/93
D019	1995 TWBIR SRS-235-F, DOE/CAO-95-1121	12/95
D034	Savannah River Laboratory Isotopic Power and Heat Sources Monthly Report Savannah River Laboratory Monthly Report, DP-65-2-8, DP-79-1-10	8/65, 10/79
D036	Savannah River Laboratory Monthly Report - 238Pu Form Processes, DPST-74-128-2	02/74
D037	Savannah River Laboratory Monthly Report, DPST-74-128-3	03/74
D038	Savannah River Laboratory Monthly Report - 238Pu Form Processes, DPST-74-128-5	05/74
D039	Savannah River Laboratory Monthly Report - 238Pu Fuel Form Processes, DPST-74-128-7	07/74
D040	Savannah River Laboratory Monthly Report - 238Pu Fuel Form Processes, DPST-74-128-10	10/74
D041	Savannah River Laboratory Monthly Report - 238Pu Fuel Form Processes,	12/74

Source Document Number	Title, Number, Revision	Date
	DPST-74-128-12	
D042	Savannah River Laboratory Monthly Report - 238Pu Fuel Form Processes, DPST-76-128-6	06/76
D043	Plutonium Fuel Form Facility	04/77
D044	Savannah River Laboratory Monthly Report, DP-79-1-4	04/79
D046	Savannah River Laboratory Monthly Report, DP-79-1-12	12/79
D047	Pu-238 Fuel Form Activities, DPST-81-133-10	10/01-31/81
D048	Pu-238 Fuel Form Activities February 1-28, 1982, DPST-82-133-2	04/82
D049	Pu-238 Fuel Form Activities December 1-31, 1982, DPST-82-133-12	12/01-31/82
D050	Pu-238 Fuel Form Activities January 1-31, 1983, DPST-83-133-1	03/83
D051	Pu-238 Fuel Form Activities February 1-28, 1983, DPST-83-133-2	02/01-28/83
D052	Pu-238 Fuel Form Activities January 1-31, 1983, DPST-83-133-1	03/83
D053	Pu-238 Fuel Form Activities March 1-31, 1983, DPST-83-133-3	05/83
D054	Pu-238 Fuel Form Activities May 1-31, 1983, DPST-83-133-5	06/83
D057	238Pu Fuel Form Activities – April 1, 1986 - March 31, 1987, DPST-86-133-4/87-3	06/87
M008	Compilation of MSDS documents for Building 235-F, LB-EQ-23 (9-75)	Various
M016	Chemical Review For 235-F Met Lab (U), OPS-STH-900279	08/28/90
M019	Burial Ground Records and TRU Waste Package Data Forms	Various
M020	TRU Waste Container Characterization (29-90) Forms	Various
M021	SRS TRU Waste Container Database, Go West Query for 235-F.	12/03
M022	Building 235-F (ABL, PuFF, and PeF) AK Container List (Unpublished) [Attachment 8 from TP-005 procedure]	01/09/04
M023	Summary of 235-F and Puff Inventory Log Book Data	08/26/03
M024	Radionuclide Characterization	01/09/04
M025	SRS Vent and Purge Data.	Undated
P001	Replacing Manipulator Boot Vent Filters, DPSOL 235-F PuFF-3302, Rev. 2	03/23/83
P003	Cleaning and Removing Plastic Hut, DPSOL 235-F-PuFF-3298, Revs. 1 and 2	03/83
P004	Replacing Cell 7 and 8 Inlet Air HEPA Filters, SPSOL 235-F-PuFF-3300, Revs. 0 and 1	03/22/82
P005	Cleaning Cells and Wing Cabinets, SPSOL 235-F-PuFF-3328, Revs. 1 and 2	03/22/82
P007	Replacing Manipulator Boot Vent Filters, DPSOL 235-F -PuFF- 3302, Rev. 1	10/03/80
P008	Removing Cell Waste, DPSOL 235-F-PuFF-3348, Rev. 2	12/02/81
P009	SOP 235-F-PuFF-3351N: Completing TRU Waste Burial Records and TRU Waste Data Package and Drum Data Sheet, DPSOP SS16.2, Revs. 0 and 1	12/01/89 and 11/15/89
P010	Removing and Installing Manipulator Model L Slave End, 90-57, Rev. 0	9/15/90

Source Document Number	Title, Number, Revision	Date
P011	Assembly/Disassembly and Disposal of Model L Manipulators, DPSOL 235-F-PuFF-3386A, Revs. 0, 3, and 4	80-82
P013	Inspection of the 294-2F Sandfilter (U), 235-F-7220, Rev. 1	01/30/92
P014	Handling and Storing Dodecanol, SOP 235-F-2320, Rev. 4	06/03/91
P015	Actions to Take for Chemical or Oil Spill Area Emergency Coordinator Response, DPSOL 235-F-PuFF-3451, Rev. 1	10/88
P016	ATD-PEF WIPP Waste Procedure, PEF-87-9-1, Rev. 0	09/01/87
P017	Pumping out the 235-F Condensate Tank for Disposal, 91-04	02/13/91
P019	PuFF Building 235-F Repair of Gel-Filled Shielding Windows, DPSOL F-11400, Rev. 0	11/75
P020	Packaging and Sealing TRU Waste, HEPA Filters, or Hut Waste in 55-gallon Drums, Carbon Steel Boxes or Polyethylene Boxes, SOP 235-F-PuFF-3351J, Revs. 0, 1, 2, and 9	11/15/89 thru 01/03/90, 06/12/01
P022	Packaging TRU Waste into a Red Pail, SOP 235-F-WH-001-NS, Rev. 2	12/13/01
P024	TRU Drum Assembly, SOP 235-F-WH-007, Rev. 3	08/30/01
P026	Packaging TRU Waste into a Drumliner, SOP 235-F-WH-012-NS, Rev. 0	12/18/01
P027	Handling Waste, DPSOL 235-F-2315, Rev. 1	12/74
P030	Cleanup of Rotameters, Service Lines and Filters, PEF Job Plan 8, Rev. 0	03/16/89
P031	Solid Radioactive Waste Handling In Building 235-F, DPSOL 235-F-PuFF-3351, Revs. 3, 4, 10, 11, and 12	10/82, 03/83, 10/89, 12/27/89, 02/90
P032	Plutonium Experimental Facility Technical Standards, DPSTS-235-F-PEF, Rev. 1	08/01/89
P036	PuFF Feed Material Acceptance, DPSOL 235-F-PuF-3251, Rev. 5	07/28/81
P037	Technical Standards Master Copy, DPSTS-235-F-1.06	8/18/60
P038	Metallographic Laboratory Reference Plan (Operating Procedures), WSRC-RP-89-367	11/89
P039	Plutonium Experimental Facility Laboratory Procedures, DPSTOM-69	02/89
P042	Using the PHA Analyzer, SOP 235-F-PuFF-3351R, Rev 0	11/15/89
P044	Process Data for PuFF Facility Metallographic Preparation of Iridium, DPST-74-127-35	05/15/74
P045	Removing Neptunium Cabinet Waste, DPSOL 235-F-1083, Rev. 0	Undated
P046	Preparing a Compacting Die, DPSOL 235-F-2051, Rev. 6	Undated
P047	Solid Radioactive Waste Handling in Building 235-F, DPSOL 235-F-PuFF-3351, Rev. 8	05/85
P048	Packaging and Sealing TRU Waste in 55-gallon Drums, SOP 235-F-3351J, Rev. 9	06/12/01
P049	Removing Cell Waste, DPSOL 235-F-PuFF-3348, Rev. 3	07/14/82
P050	Using PuFF and Compact Line Bag Ports, DPSOL 235-F-PuFF-3352, Rev. 2	12/82
P052	Special Procedure - Removing Zollinger Gloves and Installing Blanks on the Actinide Billet Line, 92-16	02/24/92

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P053	Changing Gloves and Bags in PEF, SOP 235-F-3821, Rev. 0	07/09/92
P055	Decontaminating Seal Tubes, DPSOL 235-F-PuFF-3386B, Rev. 0	09/82
P057	Removing Cell Waste, DPSOL 235-F-PuFF-3348, Rev. 3	07/14/82
P058	Using Cabinet and Cell Gloves, DPSOL 235-F-PuFF-3344A, Rev. 0	11/82
P061	Analyzing for Plutonium with the PHA, DPSOL 235-F-PuFF-3343, Rev. 0	05/79
P062	Cleaning Cells and Wing Cabinets, DPSOL 235-F-PuFF-3328, Rev. 3	09/83
P064	Replacement of In Cells Lights, DPSOL 235-F-PuFF-3322, Rev. 0	06/30/82
P065	Replacing or Decontaminating Cartridge-Type Gloves, DPSOL 235-F-PuFF-3315, Rev. 2	03/83
P066	Replacing Zollinger Gloves on PuFF Cabinets, DPSOL 235-F-PUFF-3314, Rev. 1	08/82
P067	Replacing Sphincter on Cartridge Glove Port, DPSOL 235-F-PuFF-3313, Rev. 2	08/82
P068	Changing Filters in the NDE Cabinets, DPSOL 235-F-PuFF-3311, Rev. 1	03/82
P069	Replace MSA Gas Filters, DPSOL 235-F-PuFF-3310, Rev. 2	08/82
P070	Changing In-Cell HEPA Filters, DPSOL 235-F-PuFF-3308, Revs. 2 and 3	10/82, 03/90
P071	Replacing Wand Vacuum Filters, DPSOL 235-F-PuFF-3305, Rev. 2	11/82
P072	Replace Furnace Off-Gas Sintered Filters, DPSOL 235-F-PuFF, Rev. 1	03/82
P073	Replacing Manipulator Boot Vent Filters, DPSOL 235-PuFF-3302, Rev. 2	03/83
P074	Replacing Cell 7 and 8 Inlet Air HEPA Filters, DPSOL 235-F-PuFF-3300, Rev. 1	03/82
P075	Removing Two-Piece Plastic Suit, DPSOL -235-F-PuFF-3299, Revs. 1 and 2	03/83 and 03/90
P076	Ultrasonic Weld Examination (Single Probe) -GPHS Fueled Clad, DPSOL 235-F-PuFF-4620A, Rev. 4	07/83
P077	Cleaning and Removing Plastic Hut, DPSOL 235-F-PuFF-3298, Rev. 2	03/83
P078	Encapsulated Fuel Form Review Board (EFFRB), DPSOL 235-F-PuFF-3256, Rev. 3	03/83
P079	Iridium Encapsulation of GPHS Pellets, DPSOL 235-F-PuFF-4610A, Rev. 6	05/83
P080	PuFF Feed Material Acceptance, DPSOL 235-F-PuFF-3251, Rev. 8	06/21/83
P082	Operation of Seal Pots, DPSOL 235-F-PuFF-3240, Rev. 0	02/79
P084	Loading and Unloading 238PuO2 Shipping Container, DPSOL 235-F-PuFF-3000, Rev. 3	09/83
P086	Decontaminating Entry Station, DPSOL 235-F-PuFF-3004, Rev. 2	09/83
P089	Transferring Pellets Between Cell 6 and Met Lab, DPSOL 235-F-PuFF-4591, Rev. 1	03/83
P092	Ball Jar Preconditioning, DPSOL 235-F-PuFF-3031, Rev. 1	04/14/82
P095	Charging Cold Press Die, DPSOL 235-F-PuFF-3051, Rev. 2	11/83
P096	Batching Oxide For Oxygen Exchange, DPSOL 235-F-PuFF-3025, Rev. 1	04/83
P097	Charging A Ball Mill Jar, DPSOL 235-F-PuFF-3027, Rev. 1	02/82

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P098	Ball Mill Operation, DPSOL 235-F-PuFF-3028, Rev. 2	10/83
P099	Operation of Neutron Monitor, DPSOL 235-F-PuFF-3029, Rev. 3	12/82
P100	Pellet Hot Pressing, DPSOL 235-F-PuFF-4441, Rev. 12	03/83
P101	Sintering High-Fired Shards in EP 2-1-6 (Sintering Furnace), DPSOL 235-F-PuFF-4182, Rev. 5	04/83
P102	Operating Cold Press, DPSOL 235-F-PuFF-3053, Rev. 2	11/83
P103	Breaking up Cold Pressed Compact, DPSOL 235-F-PuFF-3075, Rev. 5	05/83
P104	Shard Sintering Preparations, DPSOL 235-F-PuFF-3076, Rev. 3	11/82
P105	Crushing and Sizing Shards, DPSOL 235-F-PuFF-4160, Rev. 3	01/82
P106	Batching Sintered Oxide for Hot Pressing, DPSOL 235-F-PuFF-3079, Rev. 1	03/79
P107	Inspection of Stainless Steel Sieves, DPSOL 235-F-PuFF-3080, Rev. 2	12/82
P108	Cold Pressing, DPSOL 235-F-PuFF-4150, Rev. 5	11/82
P111	Disassembling Graphite Die, DPSOL 235-F-PuFF-3104, Rev. 4	11/83
P112	Operating Hot Press Systems, DPSOL 235-F-PuFF-3106, Rev. 1	08/82
P113	Operating the Hydraulic System, DPSOL 235-F-PuFF-3107, Rev. 3	06/24/82
P123	Using Deionized Water In Decontamination Apparatus in Cell 7, DPSOL 235-F-PuFF-3131, Rev. 5	01/83
P124	Secondary Decontamination in Cell 8, DPSOL 235-F-PuFF-3132, Rev. 5	12/09/82
P127	Analyzing for Plutonium With the PHA, DPSOL 235-F-PuFF-3343, Rev. 0	05/79
P130	Using Decontamination Solutions in Decontamination Apparatus in Cell 7, DPSOL 235-F-PuFF-3162, Rev. 1	12/83
P131	Neutralization of Cotton Diapers Wetted With Acid, DPSOL 235-F-PuFF, Rev. 1	02/83
P132	Cutting Open Returned GPHS Shipping Container, DPSOL 235-F-PuFF-3166, Rev. 0	04/82
P133	Dye Check of Iridium Weld, DPSOL 235-F-PuFF-3167M, Rev. 2	11/82
P136	Removal of Material From Liquid Waste Handling Cabinet, DPSOL 235-F-PuFF-3180, Rev. 0	07/78
P137	Decontamination of Test Welds in Cell 7, DPSOL 235-F-PuFF-3191, Rev. 0	04/83
P138	Decontamination of Fueled Clad In Cell 7 Using SC200, DPSOL 235-F-PuFF-3192, Rev. 0	05/83
P139	Neutralizing Decontamination Solutions Used in Decontamination Apparatus in Cell 7, DPSOL 235-F – PuFF – 4703	09/82

The following convention was used to assign the Source Document Tracking Number:

C	Correspondance
D	Documents (e.g. published reports)
M	Miscellaneous (e.g. unpublished data)
P	Procedures
U	Unpublished Documents

CHARACTERIZATION INFORMATION SUMMARY

There are drums in Lot 1 that are designated for Overpacking / Load Management purposes only. Refer to the Correlation of Container Identification Numbers to identify these containers.

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AK Expert Review: Jerri McTaggart Date: 4/21/04

STR Review (if necessary) N/A Date:

SPQAO Review: [signature] Date: 4/12/04

SPM Review: Mark Peacey Date: 4/12/04

SPQAO signature indicates that the information presented in this package is consistent with analytical batch reports.

SPM signature certifies that through Acceptable Knowledge testing and/or analysis that the waste identified in this summary is not corrosive, ignitable, reactive, or incompatible with the TSDF.

A summary of the Acceptable Knowledge regarding this waste stream containing specific information about the corrosivity, reactivity, and ignitability of the waste stream is included as an attachment to the Waste Stream Profile Form. By reference, that information is included in this lot.

List of procedures used:

Radiography:
CCP-TP-011, CCP Radiography Inspection Operating Procedures, March 8, 2004
CCP-TP-011, CCP Radiography Inspection Operating Procedures, July 31,2003
CCP-TP-011, CCP Radiography Inspection Operating Procedures, May 16,2002
CCP-TP-011, CCP Radiography Inspection Operating Procedures, October 18, 2001
CCP-TP-011, CCP Radiography Inspection Operating Procedures, August 29, 2001
CCP-TP-011, CCP Radiography Inspection Operating Procedures, August 1, 2001
CCP-TP-011, CCP Radiography Inspection Operating Procedures, July 2, 2001
CCP-TP-011, CCP Radiography Inspection Operating Procedures, June 1, 2001
CCP-TP-011, CCP Radiography Inspection Operating Procedures, May 21, 2001
CCP-TP-011, CCP Radiography Inspection Operating Procedures, April 27, 2001

Visual Examination:
SW15.7-SOP-TVEF-01, TVEF Operations, September 30, 2002
SW15.7-SOP-Weigh-01, June 4, 2001

CCP-TP-085, CCP TRU Visual Examination Facility Operations, October 17, 2003
CCP-TP-085, CCP TRU Visual Examination Facility Operations, August 13, 2003

CCP-TP-087, CCP Scale Operations, July 15, 2003

CCP-TP-088, CCP Program data Generation Level Review for VE, October 20, 2003
CCP-TP-088, CCP Program data Generation Level Review for VE, July 16, 2003

Headspace Gas Analysis:

CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, March 01, 2004
CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, October 31, 2003
CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, July 29, 2003
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CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, October 18, 2002
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CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, September 4, 2002
CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, July 23, 2002
CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, January 28, 2002
CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, December 7, 2001
CCP-TP-007, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Procedure, August 30, 2001

CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, October 31, 2003
CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, September 1, 2003
CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, February 5, 2003
CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, September 26, 2002
CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, September 20, 2002

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CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, July 30, 2001
CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, July 20, 2001
CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, June 4, 2001
CCP-TP-009, CCP Single Sample Manifold Data Handling Procedure, April 24, 2001

CCP-TP-029, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration, September 25, 2003
CCP-TP-029, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration, February 12, 2003
CCP-TP-029, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration, October 18, 2002
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CCP-TP-029, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration, October 9, 2001
CCP-TP-029, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration, August 28, 2001
CCP-TP-029, CCP Single Sample Manifold Headspace Gas Sampling and Analysis Methods and Equipment Calibration, July 30, 2001

CCP-TP-032, CCP Single Sample Manifold Data Validation Procedure, December 3, 2003
CCP-TP-032, CCP Single Sample Manifold Data Validation Procedure, February 3, 2003
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CCP-TP-032, CCP Single Sample Manifold Data Validation Procedure, July 22, 2001
CCP-TP-032, CCP Single Sample Manifold Data Validation Procedure, June 14, 2001
CCP-TP-032, CCP Single Sample Manifold Data Validation Procedure, April 24, 2001

Data Generation Review (SRS):

WP-AP-0016, WIPP Disposal Program Data Generation Level Review for Visual Examination, February 15, 2001

Project Level Data Validation/DQO Reconciliation:
CCP-TP-001, CCP Project Level Data Validation and Verification, August 28, 2003
CCP-TP-001, CCP Project Level Data Validation and Verification, July 10, 2003
CCP-TP-001, CCP Project Level Data Validation and Verification, February 3, 2003
CCP-TP-001, CCP Project Level Data Validation and Verification, January 13, 2003 1 MP 5/5/2004
CCP-TP-001, CCP Project Level Data Validation and Verification, May 15, 2002
CCP-TP-001, CCP Project Level Data Validation and Verification, March 8, 2002
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CCP-TP-001, CCP Project Level Data Validation and Verification, May 25, 2001
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CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, June 27, 2003
CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, April 30, 2003
CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, October 24, 2002
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CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, August 2, 2001
CCP-TP-002, CCP Reconciliation of DQOs and Reporting Characterization Data, June 2, 2001

CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, September 3, 2003
CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, June 26, 2003
CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, January 25, 2003
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CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, November 1, 2001
CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, October 4, 2001
CCP-TP-003, CCP Sampling Design and Data Analysis for RCRA Characterization, August 1, 2001

CCP-TP-030, CCP WWIS Data Entry and TRU Waste Certification, March 29, 2004
CCP-TP-030, CCP WWIS Data Entry and TRU Waste Certification, December 17, 2003
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CCP-TP-030, CCP WWIS Data Entry and TRU Waste Certification, June 8, 2001

WAP Certification:

CCP-PO-001 CCPTransuranic Waste Characterization Quality Assurance Project Plan, March 15, 2004
CCP-PO-001 CCPTransuranic Waste Characterization Quality Assurance Project Plan, January 08, 2004
CCP-PO-001 CCPTransuranic Waste Characterization Quality Assurance Project Plan, June 11, 2003
CCP-PO-001 CCPTransuranic Waste Characterization Quality Assurance Project Plan, February 5, 2003
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CCP-PO-001 CCPTransuranic Waste Characterization Quality Assurance Project Plan, January 14, 2002
CCP-PO-001 CCPTransuranic Waste Characterization Quality Assurance Project Plan, July 27, 2001
CCP-PO-001 CCPTransuranic Waste Characterization Quality Assurance Project Plan, May 10, 2001
CCP-PO-001 CCPTransuranic Waste Characterization Quality Assurance Project Plan, February 27, 2001

CCP-PO-002 CCP Transuranic Waste Certification Plan, March 15, 2004
CCP-PO-002 CCP Transuranic Waste Certification Plan, January 08, 2004
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CCP-PO-002 CCP Transuranic Waste Certification Plan, June 11, 2003
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CCP-PO-002 CCPTransuranic Waste Certification Plan, March 7, 2001

CCP-PO-004 CCP/SRS Interface Document, October 9, 2003
CCP-PO-004 CCP/SRS Interface Document, August 4, 2003
CCP-PO-004 CCP/SRS Interface Document, April 8, 2003
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CCP-PO-004 CCP/SRS Interface Document, June 7, 2001
CCP-PO-004 CCP/SRS Interface Document, April 24, 2001

CCP Correlation of Container Identification Numbers to Batch Data Report Numbers

WSP: # SR-W027-235F-HET Lot #: 01

Container ID Number	On-Line Headspace Gas BDR	NDA BDR	RTR BDR	VE BDR	Solids Sampling BDR	Solids Analytical BDR	Load Mangement/ Overpack Yes
SR109005	030404B2	SRNDA411	SRRTR1092	NA	NA	NA	
SR109113	030604B1	SRNDA417	SRRTR1093	NA	NA	NA	
SR109636	030604A1	SRNDA417	SRRTR1093	NA	NA	NA	YES
SR118951	030404A2	SRNDA412	SRRTR1092	NA	NA	NA	
SR118990	030404B2	SRNDA412	SRRTR1092	NA	NA	NA	
SR120017	030404A2	SRNDA412	SRRTR1092	NA	NA	NA	
SR120035	030404B2	SRNDA412	SRRTR1092	NA	NA	NA	
SR127827	030604B1	SRNDA417	SRRTR1093	NA	NA	NA	
SR127831	030504B1	SRNDA412	SRRTR1093	NA	NA	NA	
SR127833	030404A2	SRNDA412	SRRTR1092	NA	NA	NA	
SR127837	030404B2	SRNDA411	SRRTR1092	NA	NA	NA	
SR127840	030404B1	SRNDA411	SRRTR1091	NA	NA	NA	YES
SR127846	030404A2	SRNDA412	SRRTR1092	NA	NA	NA	
SR127863	030404B1	SRNDA411	SRRTR1090	NA	NA	NA	YES
SR127905	030404A2	SRNDA411	SRRTR1092	NA	NA	NA	YES
SR127936	030404B1	SRNDA411	SRRTR1091	NA	NA	NA	YES
SR131124	030404A1	SRNDA411	SRRTR1090	NA	NA	NA	
SR131137	030404A2	SRNDA412	SRRTR1092	NA	NA	NA	
SR132765	030604B1	SRNDA417	SRRTR1093	NA	NA	NA	
SR138513	030604A1	SRNDA417	SRRTR1095	NA	NA	NA	
SR138671	030404A1	SRNDA411	SRRTR1090	NA	NA	NA	
SR147084	030604B1	SRNDA417	SRRTR1095	NA	NA	NA	YES
SR147085	030504B1	SRNDA416	SRRTR1094	NA	NA	NA	YES
SR547010	030604A1	SRNDA417	SRRTR1093	NA	NA	NA	
SR547024	030504B1	SRNDA412	SRRTR1091	NA	NA	NA	
SR547025	030504B1	SRNDA416	SRRTR1091	NA	NA	NA	
SR547028	030404B2	SRNDA416	SRRTR1092	NA	NA	NA	
SR547037	030604A1	SRNDA417	SRRTR1093	NA	NA	NA	
SR547069	030504B1	SRNDA412	SRRTR1094	NA	NA	NA	
SR82627	030404A2	SRNDA411	SRRTR1092	NA	NA	NA	YES
SR97658	030404B2	SRNDA412	SRRTR1094	NA	NA	NA	YES

Mark Pearcy
Signature of Site Project Manager

Mark Pearcy
Printed Name

4/12/04
Date

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: SR-W027-236F-HET **Waste Stream Lot Number:** 1

ANALYTE	Transform Data Used (No, Data-Log, SQTI, other)	# Samples	# Samples above MDL	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
Benzene	NO	31	0	2352	2.19	0.29	2.26	10	NA		
Bromoform	NO	31	0	1.14	1.08	0.07	1.10	10	NA		
Carbon tetrachloride	NO	31	0	3.52	2.68	0.73	2.85	10	NA		
Chlorobenzene	NO	31	0	3.29	2.41	1.04	2.66	10	NA		
Chloroform	NO	31	0	2.10	1.43	0.58	1.56	10	NA		
Cyclohexane[a]	NA	0	—	—	—	—	—	—	NA		
1,1-Dichloroethane	LOG	31	2	2.47	1.00	0.37	1.09	10	2.30		
1,2-Dichloroethane	NO	31	0	2.80	2.06	0.64	2.21	10	NA		
1,1-Dichloroethylene	NO	31	0	3.68	2.49	1.03	2.73	10	NA		
cis-1,2-Dichloroethylene	NO	31	0	1.77	1.68	1.09	1.70	10	NA		
trans-1,2-Dichloroethylene	NO	31	0	2.10	1.93	0.15	1.96	10	NA		
Ethyl benzene	NO	31	0	2.97	2.57	48	2.69	10	NA		
Ethyl ether	NO	31	0	4.61	2.87	1.50	3.22	10	NA		
Formaldehyde[c]	NA	0	—	—	—	—	—	— 10	NA		
Hydrazine[d]	NA	0	—	—	—	—	—	— 10	NA		
Methylene chloride	LOG	31	1	2.71	1.11	0.30	1.18	10	2.30		
1,1,2,2-Tetrachloroethane	NO	31	0	4.47	3.78	0.59	3.92	10	NA		
Tetrachloroethylene	NO	31	0	2.81	2.68	0.16	2.71	10	NA		
Toluene	LOG	31	2	3.59	0.95	0.55	1.08	10	2.30		
1,1,1-Trichloroethane	LOG	31	13	5.96	1.48	1.91	1.93	10	2.30		
Trichloroethylene	LOG	31	1	4.57	0.88	0.73	1.04	10	2.30		
1,1,2-Trichloro-1,2,2-trifluoroethane	NO	31	0	3.50	2.34	1.00	2.58	10	NA		
1,2,4-Trimethylbenzene[a]	NA	0	—	—	—	—	—	—	NA		
1,3,5-Trimethylbenzene[a]	NA	0	—	—	—	—	—	—	NA		

WSPF Page 21 of 27 ≤15 ppmv

CCP Headspace Gas UCL_{90} Evaluation Form

WSPF #: SR-W027-235F-HET **Waste Stream Lot Number:** 1

ANALYTE	Transform Data Used (No, Data-Log, SQTI, other)	# Samples	# Samples above MDL	Maximum (ppmv)	Mean (ppmv)	SD (ppmv)	UCL_{90} (ppmv)	PRQL (ppmv)	Transformed PRQL (N/A or Value)	UCL_{90} > PRQL Yes	EPA Code
m-Xylene[b]	NO	31	0	2.75	2.72	0.03	2.73	10	NA		
p-Xylene[b]	NO	31	0	2.75	2.72	0.03	2.73	10	NA		
o-Xylene	NO	31	0	3.00	2.89	0.13	2.93	10	NA		
Acetone	LOG	31	1	3.32	2.19	0.25	2.25	100	4.61		
Butanol	LOG	31	3	4.79	2.44	0.62	2.59	100	4.61		
Methanol	LOG	31	1	3.79	2.00	0.34	2.08	100	4.61		
Methyl ethyl ketone	LOG	31	1	3.64	2.35	0.28	2.42	100	4.61		
Methyl isobutyl ketone	NO	31	0	1386	10.52	2.88	11.20	100	NA		

[a]These compounds are from the TRAMPAC and are flammable VOCs that do not appear in the QAPJP or the WIPP WAP. These are not part of the target analysis list, but samples may be analyzed for these compounds.
[b]These xylene isomers cannot be resolved by the analytical methods employed in the program. M-xylene and p-xylene will be reported as "Total m-p-Xylene."
[c]Required only for homogenous solids and soil/gravel waste from Los Alamos National Laboratory and Savannah River Site.
[d]Required only for homogenous solids and soil/gravel waste from Oak Ridge National Laboratory and Savannah River Site.

Comments:

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CCP Headspace Gas Summary Data

WSP:# SR-W027-2352F-HET Lot(s) # : 1

Tentatively Identified Compound	Maximum Observed Estimated Concentrations (ppmv)	# Samples Containing TIC	% Detected
2-propanol, 2-methyl	35.78	3	9.68
Isopropyl Alcohol	224.87	3	9.68
(S)-2-Hydroxypropanoic acid	55.49	2	6.45
3-Furanol-Tetrahydro	38.61	1	3.23

Data Confirms Acceptable Knowledge? Yes ☑ No ☐

If no, describe the basis for assigning the EPA Hazardous Waste Codes:

SPM Signature Mark Peacy Date 4/12/04

CCP RTR/VE Summary of Prohibited Items and AK Confirmation

WSP#: SR-W027-235F-HET Lot(s)#: 1

Container Number	RTR Prohibited Items [a]	Visual Examination Prohibited Items [a]	AK Confirmation [b c]
NA	None of the containers in this Lot had a prohibited item detected in the Radiography / NDE process.	None of the containers in this Lot underwent Visual Examination	Consistent with CCP-TP-005 AK Confirmation Checklist

a. See Batch Data Reports
b. Attachment 10 of CCP-TP-005, *CCP Acceptable Knowledge Documentation*
c. If AK has assigned U134 to this waste stream, then any liquids in these containers are prohibited items (not acceptable by the TSDF).

Mark Pearcy — Site Project Manager Signature
Mark Pearcy — Printed Name
4-12-04 — Date

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CCP Reconciliation with Data Quality Objectives

SPQAO Sampling Completeness

RTR:
Number of valid samples: 31 Number of total samples analyzed: 31
Percent Complete: 100 (QAO is 100%)

NDA:
Number of valid samples: 31 Number of total samples analyzed: 31
Percent Complete: 100 (QAO is 100%)

HSG:
Number of valid samples: 31 Number of total samples collected: 31
Percent Complete: 100 (QAO is ≥90%)
Number of valid samples: 31 Number of total samples analyzed: 31
Percent Complete: 100 (QAO is ≥90%)

Total VOC:
Number of valid samples: N/A (3) Number of total samples collected: N/A (3)
Percent Complete: N/A (3) (QAO is ≥90%)
Number of valid samples: N/A (3) Number of total samples analyzed: N/A (3)
Percent Complete: N/A (3) (QAO is ≥90%)

Total SVOC:
Number of valid samples: N/A (3) Number of total samples collected: N/A (3)
Percent Complete: N/A (3) (QAO is ≥90%)
Number of valid samples: N/A (3) Number of total samples analyzed: N/A (3)
Percent Complete: N/A (3) (QAO is ≥90%)

Total Metals:
Number of valid samples: N/A (3) Number of total samples collected: N/A (3)
Percent Complete: N/A (3) (QAO is ≥90%)
Number of valid samples: N/A (3) Number of total samples analyzed: N/A (3)
Percent Complete: N/A (3) (QAO is ≥90%)

SPQAO Signature and Date: Gene Quintana

I certify that sufficient data have been collected to determine the following Program-required waste parameters:

CCP Reconciliation with Data Quality Objectives

WSP#: SR-W027-235FF-HET Lot#: 1

	Y/N/NA	Reconciliation Parameter
1.	Y (5)	Waste Matrix Code.
2.	Y (5)	Waste Material Parameter Weights.
3.	Y	The waste matrix code identified is consistent with the type of sampling and analysis used to characterize the waste.
4.	Y (1)	The TRU activity reported in the BDRs for each container demonstrates with a 95% probability that the container of waste contains TRU radioactive waste.
5.	Y	Potential Flammability. Is there sufficient AK or analytical data to demonstrate that the waste meets the potential flammability limits (Headspace Gas, BDR and Summary Sheet)?
6.	Y (2)	Mean concentrations, upper 90% confidence limit (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for each **VOC** in the headspace gas of each container were calculated and compared with the program required quantitation limits, as reported in CCP-TP-003-A3, and additional EPA Hazardous Waste codes were assigned as required. Samples were randomly collected (when appropriate).
7a.	N/A (3)	Mean concentrations, UCL_{90} values for the mean concentration, standard deviations, and the number of samples collected for **total VOCs** were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-A4, and additional EPA Hazardous Waste codes were assigned as required. Samples were randomly collected.
7b.	N/A (3)	Mean concentrations, upper 90% confidence limit (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for **total SVOCs** were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-A5, and additional EPA Hazardous Waste Codes were assigned as required. Samples were randomly collected.
7c.	N/A (3)	Mean concentrations, upper 90% confidence limit (UCL_{90}) values for the mean concentration, standard deviations, and the number of samples collected for **total metals** were calculated and compared with the program required quantitation limits and regulatory thresholds, as reported in the Characterization Information Summary, CCP-TP-003-A6, and additional EPA Hazardous Waste codes were assigned as required. Samples were randomly collected.
8.	Y	The data demonstrates whether the waste stream exhibits are toxicity characteristic under 40 CFR 261, Subpart C.

CCP Reconciliation with Data Quality Objectives

WSP#: SR-W027-235FF-HET Lot#: 1

	Y/N/NA	Reconciliation Parameter			
9	Y	Waste stream can be classified as hazardous or nonhazardous at the 90-percent confidence level.			
10.	Y	Sufficient number of waste containers have been visually examined to determine the UCL_{90} for the miscertification rate is less than 14%.			
11.	Y	Appropriate packaging configuration and Drum Age Criteria (DAC) is applied and documented in the headspace gas sampling documentation, and the drum age met prior to sampling.			
12.	Y	TICs were appropriately identified and reported in accordance with the requirements of Section B3-1 of the QAPjP.			
13.	Y	The PRQLs for headspace gas VOCs were met for all analyses as evidenced by the analytical batch data reports.			
14.		The overall completeness, comparability, and representativeness QAOs were met for each of the analytical and testing procedures as specified in the WAP Sections B3-2 through B3-9 prior to submittal of a waste stream profile form for a waste steam or waste stream lot.			
			Completeness	**Comparability**	**Representativeness**
		Radiography	Y	Y	Y
		Headspace Gas Sampling And Analysis	N/A (4)	N/A (4)	N/A (4)
		Headspace Gas Analysis	Y	Y	Y
		Solids Sampling	N/A (3)	N/A (3)	N/A (3)
		Total VOCs	N/A (3)	N/A (3)	N/A (3)
		Total SVOCs	N/A (3)	N/A (3)	N/A (3)
		Total Metals	N/A (3)	N/A (3)	N/A (3)

Mark Pearcy
Signature of Site Project Manager

Mark Pearcy
Printed Name

4-12-04
Date

(1) There may be drums in this Lot designated for Overpacking / Load Management whereby the final shipping payload container will contain TRU radioactive waste. Refer to CCP-TP-002-A4 to identify these drums.
(2) No additional EPA Hazardous Waste Codes assigned.
(3) This is an S5000 Summary Category Group Waste Stream.
(4) On Line Sampling System.
(5) None of the containers in this Lot underwent Visual Examination.

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